

Appl. No. 10/800,945

Amdt. dated June 30, 2006

Reply to Office action of June 15,2006

**Amendments to the Specification:**

Please cancel previous Specification and replace with the following complete specification (the prior art section has been removed):

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**TITLE OF INVENTION**

HOT DRINK CUP LID WITH COOLING AIR-FLOW invented by  
Constance Linda Pitts, United States citizen, residing at 5748  
Clark Road, West Manchester, Ohio 45382.

**CROSS-REFERENCE TO RELATED APPLICATIONS**

Not Applicable.

**STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT**

Not Applicable.

**REFERENCE TO A MICROFICHE APPENDIX**

Not Applicable.

**BACKGROUND OF THE INVENTION**

This invention is in the field of cup lids for hot beverages and is designed to improve the safety and enjoyment when drinking very hot liquids, such as hot coffee. This new and unique utility invention for an article of manufacture is a tremendous improvement over prior art.

This invention is uniquely different from prior art.

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#### **BRIEF SUMMARY OF THE INVENTION**

This invention was developed to answer an urgent need by the purveyors and consumers of hot liquid such as hot coffee, hot tea, hot chocolate, etc., when drinking from a cup such as that offered at fast food restaurants, carry-outs, and service mini-marts. When liquids are hot they can burn the lips and inside surface of the mouth. If cooled quickly with such as ice cubes, then they will be cold too soon; if allowed to cool slowly in the cup with some sort of lid, it will be too long before the liquid is drinkable. This is especially apparent when traveling. Therefore I have invented the HOT DRINK CUP LID WITH COOLING AIR-FLOW, which allows air to pass over the hot liquid as it is sipped and thus reducing the temperature of the liquid passing through the drinking opening but not prematurely lowering the temperature of the body of liquid remaining in the cup. This allows the enjoyment of a hot liquid for a longer period of time and increases the safety of drinking hot liquids from a cup with a lid such as the disposable cups and lids offered at fast food restaurants, carry-outs, service mini-marts, and other establishments.

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**BRIEF DESCRIPTION OF SEVERAL VIEWS OF THE DRAWINGS**

Figure 1: Perspective

Figure 2: Side View

Figure 3: Top View

Figure 4: Cross Section A-A Through Center of Lid

Figure 5: Diagrammatic of Cooling Action

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#### **DETAILED DESCRIPTION OF THE INVENTION**

In accordance with the invention, I describe the HOT DRINK CUP LID WITH COOLING AIR-FLOW invention, which provides a lid **1**, in Figure #1, with cooling air-flow hole **8** for use on beverage containers, such as a drinking cup **14**. Specifically the lid **1** has a raised central area **4** with a drinking area plane **5** and drinking hole **6** located on one side of the drinking area plane **5**.

Further, there is an angular raised portion **15** raising away from the drinking hole **6**; and the adjacent angular recessed portion **16** which angles down and away from the drinking hole **6**. Further, centrally located on the angular recessed portion **16** is the cooling air-flow hole **8**. The cooling air-flow hole **8** is located on the same radius as the drinking hole **6**, and in a plane slightly lower than the plane of the drinking hole **6**. The cooling air is drawn through the cooling air-flow hole **8** and into the open space above the hot liquid/beverage **17** and up through the drinking hole **6**, traveling with the hot liquid/beverage **17** out of the drinking hole **6**, thus cooling the hot liquid/beverage **17** as the liquid/beverage **17** is being consumed.

The prototype of the lid **1** embodied a raised circular area **4** on which a drinking hole **6** is placed in drinking area plane **5**; other forms of embodiment where a raised drinking area is present would be covered by this invention. The prototype of the lid **1** incorporates the raised drinking area plane **5**, the drinking hole **6**, the recessed cooling air-flow hole **8**, and the angular members

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**9, 15, 16** resulting in a cooling effect of hot liquid/beverages **17** at the exit of the drinking hole **6** yet retaining the interior heat within the cup **14**. The cooling air-flow hole **8** is located above the rim of the cup **14** and below the drinking hole **6**. The optimum position of the cooling air-flow hole **8** is apparent in figure 4 (cross-sectional view).

No know invention or device of prior art utilizes a cooling air-flow hole **8** arrangement of embodiment so as to pass cooling air over hot liquid/beverages **17** as the cup **14** is tilted in at normal drinking angle and the hot liquid/beverage **17** is drawn out through the drinking hole **6**, Figure 5.

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## **DRAWINGS**

Figure 1 -- HOT DRINK CUP LID WITH COOLING AIR-FLOW (perspective)

Legend

1. lid
2. mounting portion which mates with the associated container
3. recessed channel
4. raised portion
5. drinking area plane
6. drinking hole
7. recessed portion
8. cooling air-flow hole
9. angled portion
11. raised portion opposite the drinking hole
15. angular raised portion
16. angular recessed portion

Figure 2 - Side View

Legend

1. lid
2. mounting portion which mates with the associated container
3. recessed channel
4. raised portion
5. drinking area plane
6. drinking hole
7. recessed portion
8. cooling air-flow hole

- 9. angled portion
- 15. angular raised portion
- 16. angular recessed portion

Figure 3 -- Top View

Legend

- 1. lid
- 2. mounting portion which mates with the associated container
- 3. recessed channel
- 5. drinking area plane
- 6. drinking hole
- 8. cooling air-flow hole
- 9. angled portion
- 15. angular raised portion
- 16. angular recessed portion

Figure 4 -- Sectional View

Legend

- 1. lid
- 2. mounting portion which mates with the associated container
- 3. recessed channel
- 4. raised portion
- 5. drinking area plane
- 6. drinking hole
- 7. recessed portion
- 8. cooling air-flow hole
- 9. angled portion



- 11. raised portion opposite the drinking hole
- 15. angular raised portion
- 16. angular recessed portion

Figure 5 -- Diagrammatic View of Lid in Use.

- 1. lid
- 6. drinking hole
- 8. cooling air-flow hole
- 13. action path of air and liquid flow
- 14. cup
- 17. hot liquid/beverage